

DOCUMENT-IDENTIFIER: US 5084895 A
TITLE: Semiconductor light emitting system

----- KWIC -----

DEPR:

Next, the stripe structure is produced as shown in FIG. 10(B), which shows the cross section along the line A--A of FIG. 10(A). The stripe step removes partially the ohmic contact electrode layer 16 and a part of the clad layer 15, by providing a recess 17, 18 (FIG. 1), so that the remaining portion functions as a laser. In this step, a photoresist is first deposited on the whole surface of the layer 16. Then, the mask of FIG. 10E covers the structure. In FIG. 10E, the shadowed portion is transparent, and the elongated portion S' which corresponds to a stripe and the mark M is opaque. Then, the structure is illuminated with ultraviolet beam through the mask of FIG. 10E. Thus, the structure is illuminated by the beam except of the opaque portions. Next, the structure is developed so that the illuminated portion of the photoresist is removed. Then, ion beam of chloride (Cl.sub.2) illuminates the structure so that the portion not covered with the photoresist is grooved. The depth of the groove is that it reaches the clad layer 15, but does not reach the active layer 14. Finally, the photoresist which remains is removed. FIG. 10D is a plane view after the stripe step, and FIG. 10C is the cross section of FIG. 10D. The mask of FIG. 10E has a plurality of stripe patterns S' so that a plurality of stripes S are produced simultaneously. It should be noted that the mask has a marker M for positioning other mark. It should be noted that the pattern of the marker M is printed on the semiconductor structure in the above step.

DEPR:

It should be appreciated in the above steps that the alignment of an optical axis of a laser (or a light emitting diode) and an optical axis of a lens is automatically accomplished during the photolithoetching steps by positioning markers of the masks.

CCOR:

372/50

CCXR:

372/108